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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/784,431	02/23/2004	Bradford G. Corbett JR.	20470.046	2531

42922 7590 06/12/2007
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EXAMINER

DANIELS, MATTHEW J

ART UNIT	PAPER NUMBER
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1732

MAIL DATE	DELIVERY MODE
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06/12/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/784,431	Applicant(s) CORBETT, BRADFORD G.	
	Examiner Matthew J. Daniels	Art Unit 1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's amendment filed 21 March 2007 has been entered. Claims 1 and 6 are pending in the instant application.

Claim Rejections - 35 USC § 112

2. The rejection set forth previously is withdrawn in view of the amended claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim rejections set forth previously are withdrawn in view of the new references cited below, which are believed to better address the claimed invention.
4. **Claims 1 and 6** are rejected under 35 U.S.C. 103(a) as being unpatentable over Corbett (USPN 6328309) in view of Cousins (USPN 2597976) and Encyclopedia of Polymer Science and Technology (Vol. 10, pages 460-482), hereinafter "Encyclopedia". **As to Claim 1**, Corbett teaches a method of installing a gasket in a socket end of a thermoplastic pipe (Abstract, line 4) which is used to form a pipe coupling (Figs. 3-10), the method comprising the steps of:

providing a mandrel with an inner end and an outer end and having a generally cylindrical outer working surface (Figs. 3-6, item 17, Figs. 7-10, item 53);

installing a gasket at a first circumferential position on the outer working surface (Figs. 3-6, item 11, Figs. 7-10, item 57), the gasket being coated (3:54-4:53);

providing a retention member at a second circumferential location on the mandrel nearer the inner end of the mandrel, the retention member abutting the gasket in a normally extended position but being retractable to a retracted position in a subsequent manufacturing step (Figs. 3-10, in particular Figs. 3-6, item 23 and Figs. 7-10, item 61);

heating a socket end of the thermoplastic pipe (5:10-11);

forcing the heated socket end of the thermoplastic pipe over the working surface of the mandrel and over the gasket with the retention member being in the extended position, whereby the heated socket end of the thermoplastic pipe flows over the gasket to form a retention groove for retaining the gasket and again contacts the working surface of the mandrel (Figs. 3-10, in particular Fig. 10);

cooling the heated socket end of the thermoplastic pipe (5:28-30);

retracting the cooled socket end of the thermoplastic pipe and the retained gasket from the working surface of the mandrel (6:30-32); and

wherein the gasket coating is effective to provide oil resistance (implicit in that fluoroplastics and other substantially inert polymers are used as the coating, 3:54-4:12).

Corbett does not specifically teach (a) applying a Polyamide 6, 11, or 12 nylon coating, and (b) that the gasket coating is effective to provide oil resistance, which is at least that of nitrile rubber at a fraction of its cost.

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However, these aspects of the invention would have been *prima facie* obvious for the following reasons:

- (a) Cousins teaches a protective layer (Fig. 2) applied to a rubber-like gasket, the protective layer being a nylon coating (2:35-42) and applied by dipping (4:13, 4:22). Cousins teaches that any nylon may be used (3:30-32), and in particular Cousins teaches “polymerized epsilon caprolactam” (3:5), which is asserted to be Nylon 6. Alternatively or additionally, it is asserted that Cousins’ disclosure of nylon coatings as a genus is sufficient to anticipate the particular species claimed because they would be at once envisaged from the nylon genus. As support for both positions, the Encyclopedia teaches (page 462, top) that Nylon-6 is polycaprolactam (as disclosed by Cousins at 3:5), and that the claimed nylons (6, 11, and 12) are three of only five nylons disclosed on page 468.
- (b) Cousins, by teaching that the same nylon gasket coating is provided to a rubber-like gasket, implicitly provides the claimed oil resistance and cost benefits.

It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to incorporate the methods of Cousins and the Encyclopedia into that of Corbett (a) in view of Corbett’s suggestion that a coating should be used (3:54-4:53) and Cousins disclosure of a coating (2:35-42), (b) because Corbett suggests a low friction coating (3:54) and the Encyclopedia teaches that 6, 11, and 12 nylon polyamides provide “low coefficient of friction” (page 460, second paragraph under Polyamide Plastics), or (c) because a nylon coating would produce various benefits to a gasket including resistance to swelling, resistance to plastic flow, ability to exert pressure continuously while being compressed, ability to seal rough bearing

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surfaces against leakage of liquids under pressure along such surfaces, and the retention of flexibility (all disclosed by Cousins at 1:28-36).

As to Claim 6, Corbett teaches the elastomeric ring, circumferential area, exterior surface, and wherein the coating is applied to selected portions of the circumferential contact area (Fig. 2, compared with instant Fig. 2). Cousins also provides an elastomeric ring, circumferential area, exterior surface, and wherein the coating is applied to selected portions of the circumferential contact area (Fig. 1 and 4:22-26).

Response to Arguments

5. Applicant's arguments filed 21 March 2007 have been fully considered but they are not persuasive or are moot in view of the new grounds of rejection set forth above. The arguments appear to be on the following grounds:

- a) The wrong type of gasket material or coating on the gasket would produce undue friction during the belling process or result in imperfect internal groove being formed. Even though it may be well known to use nylon coatings for gaskets in the automotive or other unrelated industries, it would not have been obvious to use a nylon coated gasket in a Rieber type belling operation. The coatings must pass a number of specifications.
- b) Applicant's particular class of coating material has been found to provide excellent bonding to rubber, flexibility and elasticity, sealability, and oil resistance.
- c) Applicant provides an additional attachment to show other characteristics of the invention.

6. These arguments are not persuasive for the following reasons:

a) Corbett suggests an “anti-friction coating” (3:54), and thus it is explicitly suggested to provide a coating having a low friction to the inner diameter of a gasket, the same surface where the inventive coating is provided (compare Fig. 2 of Corbett with the instant figures). While Corbett does not appear to explicitly teach polyamides or nylons, there is broad suggestion of “synthetic polymeric coating” (3:55-56). In view of the references to Cousins, which provides a gasket having a nylon coating by dipping, and the Encyclopedia, which teaches the low-friction characteristics of nylons, it is asserted that the claimed combination is prima facie obvious. However, additionally, in MPEP §2145(VII) it is stated that, “[i]t is not necessary that the prior art suggest the combination to achieve the same advantage or result discovered by applicant.”

See In re Linter, 458 F.2d 1013, 173 USPQ 560 (CCPA 1972).

b) While Applicant’s particular class of coating material is asserted to provide excellent bonding to rubber, flexibility and elasticity, sealability, and oil resistance, Cousins teaches a gasket having a nylon coating which provides acceptable bonding to a rubber or rubber-like material (2:5-6, 2:35-42), flexibility or elasticity (2:36), sealability (1:33-34), and resistance to hydrocarbons (1:28-29). It is asserted that there is no unexpected result when a nylon coating is applied to a rubber or rubber-like gasket material.

c) It is noted that any evidence should be made by way of oath or declaration under 37 CFR 1.132.

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Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. With regard to the Encyclopedia reference, it should be noted that page 481 discloses certain fluidized-bed and spray application processes (under the section Powder Processing) which shares certain similarities with the dip-coating in a fluidized bed or powder spraying disclosed on page 9 of the instant specification.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew J. Daniels whose telephone number is (571) 272-2450. The examiner can normally be reached on Monday - Friday, 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Matthew J. Daniels

A.U. 1732

7 June 2007